M 547: Measure Theory (Fall 2012)

Class: MWF 11–12, 1-147 Wilson Hall

Instructor: Lukas Geyer `<geyer@math.montana.edu>`, Tel. *5342, 2-254 Wilson

Office Hours: M 9–10 (in the MLC), W 1–2, Th 3–4, or by appointment.

Text: Robert G. Bartle, *The Elements of Integration and Lebesgue Measure*, Wiley.

Additional Texts: H. L. Royden, *Real Analysis*, Prentice Hall.

Prerequisites: M 382 (MATH 362) or M 505 (MATH 505)

This course will give a rigorous introduction to the theory of measure and integration. Both the general theory and the explicit construction and properties of Lebesgue measure will be studied. The aim is to cover chapters 1–10 of Bartle's book.

The course grade will be comprised of the grades on weekly homework assignments (30%), a midterm exam (30%), and a final exam (40%). Every student should write up their own homework solutions, but collaboration on solving the problems is encouraged.